

# Geoffrey D. Reeves

## ***Education***

University of Colorado, Boulder	Physics	BA ( <i>summa cum laude</i> )	1983
Stanford University	Applied Physics	Ph.D	1988

## ***Appointments***

2005-present: Senior Scientist, Space Science & Applications Group, LANL.  
1999-2005: Group Leader for Space Science & Applications, Los Alamos National Laboratory.  
1991-1999: Staff scientist at Los Alamos National Laboratory.  
April-October, 1997: Sabbatical - Max Planck Institut für Aeronomie, Germany  
1989-1991: Post-doctoral research associate at Los Alamos National Laboratory.  
1983-1988: Graduate Research Assistant at Stanford University. Thesis advisor, Peter M. Banks.  
1981-1983: Undergraduate Research, University of Colorado.

## ***Research & Activities in Space Plasma Physics:***

Deputy PI/Science Team lead for the Van Allen Probes (RBSP) Energetic-particle Composition and Thermal-plasma (ECT) suite which comprises the HOPE, MageIS, and REPT instruments and the ECT Science Operations Center.

Co-Investigator on: MMS, LANL/GEO, POLAR/CEPPAD, POLAR/CAMMICE, & CLUSTER/RAPID satellite investigations.

Leader of the Dynamic Radiation Environment Assimilation Model (DREAM) project which provides real-time and retrospective models of natural and nuclear radiation belts

Active in Space Weather activities including Space Environment Effects Working Group (SEEWG), NSF Space Weather Program, NASA Living With A Star (LWS) program, commercial and military anomaly investigations

Analyzed and published data from a variety of satellites programs: RBSP, THEMIS, IMAGE, WIND, POLAR, GALILEO, GEOTAIL, DMSP, HEO, GPS, SAMPEX, GOES, CRRES, IMP-8, Viking, Freja, and LANL geosynchronous satellites and comparison of satellite data with ground-based observations including magnetometers and radars.

Research topics of interest include: radiation belt structure and dynamics, relativistic electron events, geomagnetic storms & substorms, energetic neutral atom imaging, solar proton events, effects of space environment on spacecraft and operations, magnetic field models and mapping, and energetic particle boundaries in the magnetosphere.

Recent Studies include:

- 1) Analysis of radiation belt phase space densities demonstrating local acceleration by wave-particle interactions in the heart of the radiation belts
- 2) Deriving physical understanding of radiation belt structure and dynamics using data assimilative models. Development of new 3D electron diffusion codes
- 3) Statistical analysis of the relationship between solar wind velocity and relativistic electron fluxes over two solar cycles (1989-2012)
- 4) Validation and prediction efficiency studies for the DREAM model
- 5) Development of a new model of the beta-decay electron belt produced by high altitude nuclear explosions
- 6) Statistical analysis of geosynchronous satellite anomalies
- 7) Studies of relativistic electron dropout (loss) events throughout the outer electron belt

***Publications:*** (available by request or at <http://www.researcherid.com/rid/E-8101-2011>)

45 first-author publications + 287 co-author publications: 184 with data in the web of science  
h-index = 42

***Awards:*** LANL Fellow's Prize for Outstanding Scientific Leadership (2012)

LANL Distinguished Performance Award for the Karnac Space Protection Program (2013)